

Table 2. Operating Parameters [10-17, 19, 20]

Parameter		Value								Measurement Method	
		Subplot									
		A	B	C	D	E	F	G	H		
First Lift of Soil (a)											
Total Heterotrophs (cfu/gm)		6.4×10^{-6} - 7.4×10^{-6}	1.1×10^{-7} - 1.6×10^{-7}	7×10^{-5} - 9.9×10^{-7}	4.1×10^{-7} - 2.7×10^{-7}	1.5×10^{-7} - 7.8×10^{-7}	1.0×10^{-7} - 4.3×10^{-7}	1.9×10^{-7} - 4.3×10^{-7}	1.8×10^{-7} - 4.6×10^{-7}	(b)	
PAH Degraders (cfu/gm)		1.0×10^{-5} - 5.0×10^{-7}	3.0×10^{-5} - 2.2×10^{-7}	1.0×10^{-5} - 5.7×10^{-6}	2.0×10^{-5} - 7.2×10^{-6}	2.8×10^{-7} - 1.9×10^{-7}	1.4×10^{-5} - 5.7×10^{-6}	3.6×10^{-6} - 1.5×10^{-7}	3.2×10^{-6} - 3.0×10^{-7}	(c)	
Mixing Rate/Frequency		Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	--	
Moisture Content (%)		7.7 to 8.8	8.1 to 9.6	10.3 to 10.5	9.3 to 9.5	12.4 to 22.8	11.0 to 11.9	11.2 to 12.5	12.4 to 13.2	Not available	
pH		6.8	6.8 to 7.2	7.0 to 7.7	6.6 to 7.2	6.7 to 6.8	6.8 to 7.1	6.4 to 6.8	6.5 to 6.7	USEPA Method SW-846/9045	
Residence Time (months)		9	9	15	9	9	9	9	9	--	
Temperature (°F)		17 to 99	17 to 99	13 to 99	17 to 99	17 to 99	17 to 99	17 to 99	17 to 99	Thermometer (d)	
Carbon/Total Kjeldahl Nitrogen		10.3	15.4	9 to 11.0	10.1	8.8	11.5	13.2	14.2	Not available	
Hydrocarbon Degradation (mg/kg/mo)		58	18	13	38	28	20	38	38	Calculated value	
Second Lift of Soil (a)											
Total Heterotrophs (cfu/gm)		6.3×10^{-7} - 6.6×10^{-2}	1.7×10^{-5} - 1.3×10^{-3}	N/A	1.8×10^{-5}	1.3×10^{-7} - 8.4×10^{-6}	1.2×10^{-7} - 2.5×10^{-7}	3.8×10^{-6}	2.3×10^{-6}	(b)	
PAH Degraders (cfu/gm)		7.0×10^{-6} - 4.5×10^{-6}	2.0×10^{-5} - 6.0×10^{-6}	N/A	9.0×10^{-5}	2.5×10^{-6} - 6.2×10^{-6}	3.1×10^{-7} - 1.7×10^{-7}	4.2×10^{-6}	5.5×10^{-6}	(c)	
Mixing Rate/Frequency		Tilled once every 2 wks	Tilled once every 2 wks	N/A	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	--	
Moisture Content (%)		10.3 to 15.4	12.0 to 11.6	N/A	12.4	12.9 to 21.1	14.5 to 19.0	14.8	12.9	Not available	
pH		6.7 to 7.3	6.8 to 7.5	N/A	7.6	7.6	6.8 to 7.6	7.6	7.8	USEPA Method SW-845/9045	
Residence Time (months)		10	10	N/A	6	6	6	6	6	--	
Temperature (°F)		13 to 102	13 to 102	N/A	13 to 94	13 to 94	13 to 94	13 to 94	13 to 94	Thermometer (d)	
Carbon/Total Kjeldahl											

Table 2 (continued). Operating Parameters [10-17, 19, 20]

Parameter	Value								Measurement Method
	Subplot								
	A	B	C	D	E	F	G	H	
Third Lift of Soil (a)									
Total Heterotrophs (cfu/gm)	N/A	N/A	4.87 × 10 ⁻ 7.90 × 10	3.20 × 10 ⁻ 9.07 × 10	2.7 × 10 ⁻ 7.55 × 10	7.0 × 10 ⁻ 1.1 × 10	5.0 × 10 ⁻ 1.39 × 10	7.0 × 10 ⁻ 3.67 × 10	(b)
PAH Degraders (cfu/gm)	N/A	N/A	1.85 × 10 ⁻⁴ 4.0 × 10 ⁻⁵	1.15 × 10 ⁻⁴ 3.0 × 10 ⁻⁵	5.5 × 10 ⁻³ 4.0 × 10 ⁻⁵	2.75 × 10 ⁻⁴ 3.0 × 10 ⁻⁵	7.5 × 10 ⁻³ 4.90 × 10 ⁻⁶	2.95 × 10 ⁻⁴ 8.0 × 10 ⁻⁵	(c)
Mixing Rate/Frequency	N/A	N/A	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	Tilled once every 2 wks	--
Moisture Content (%)	N/A	N/A	12.6 to 16.3	13.9 to 14.6	8.5 to 14.7	9.4 t 13.9	8.9 to 14.0	8.9 to 14.2	Not available
pH	N/A	N/A	6.4 to 7.0	6.5 to 6.8	6.6 to 6.9	6.7 to 6.9	6.7 to 7.0	6.7 to 7.0	USEPA Method SW-846/9045
Residence Time (months)	N/A	N/A	4	4	4	4	4	4	--
Temperature (°F)	N/A	N/A	29 to 102	29 to 102	29 to 102	29 to 102	29 to 102	29 to 102	Thermometer (d)
Carbon/Total Nitrogen Kjeldahl	N/A	N/A	30 to 37	15 to 58	20 to 31	43 to 67	6 to 51	30 to 32	Not available

N/A - This lift of soil was not applied to this subplot.

(a) - The values for each lift of soil are ranges of values measured in samples collected from the time that the lift was applied to the subplot until the next lift of soil was applied to the subplot.

(b) - "Agar-Plate Method for Total Microbial Count," F. ClarkMethods of Soil Analysis Vol. 2, pp. 1460-1465.

(c) - "Replica Plating Method for Estimating Phenanthrene-Utilizing and Phenanthrene-Cometabolizing Microorganisms," Shiaris, M., Cooney, Applied and Environmental Microbiology, February 1983, Vol. 45, No. 2, pp. 706-710.

(d) - These values are for the ambient air temperatures measured between application of lifts.